

Summary Version of the Report of the Porcupine Woods Subcommittee (with revisions based on more recent information)

Background. Porcupine Woods was acquired by the Town in the mid-1970's when a developer threatened to build townhouses on the property; it comprises approximately 2.5 acres. A committee was formed to consider possible uses for the space, which presented its findings and proposals in a report dated March 31, 1975. The Town Council unanimously agreed with committee at its April 14, 1975 meeting. Among other recommendations the committee urged that the Woods be retained as a "quiet, natural place...to stroll and enjoy the seasonal changes....[with] no unnatural man-made objects."

In September 2012, the Parks and Open Spaces Committee (POSCO) established this subcommittee in view of nearly four decades of changes in Porcupine Woods including the ongoing battle against invasive species and the devastating storm of June 29, 2012 that brought down trees and left the understory littered with limbs and branches. Members of the subcommittee are: Suzanne Grefsheim, Chair, Chris Keller, Frank Obrimski, Cathy Rinzel, and Ken Schwartz. This excerpted paper includes the findings and recommendations of the subcommittee in the most crucial areas of Porcupine Woods that require attention. The subcommittee is looking at drainage and erosion issues for further study.

Discussion. The 1975 committee anticipated many of today's major environmental preservation concerns; for example, it recommended removal of invasive species, replacing them with native plants; improving drainage of the creek bed, whose water ultimately ends up in the Bay; and actively managing the Woods, which ensures the health of the ecosystem. *Existing conditions.* Porcupine Woods has been largely left in an unmanaged "natural" state, with the exception of two paths through the woods and two small footbridges spanning the drainage creek. In the 1970's and 80's, volunteers undertook new plantings throughout the Woods; in the early 1990's a small area was planted as an experiment in establishing a stand of desirable native plants. Many of the original plantings and the entire 1990's plot have disappeared; some of the damage is attributable to the increased presence of deer, but most is owing to competition from invasives and to lack of adequate follow-up/ongoing maintenance. The Arboretum Committee organizes an annual "Weed Warrior Day" to pull weeds and invasive shrubs, and individuals have dedicated many unpaid hours to weed out invasive plants. Although the efforts of volunteers are both generous and appreciated, they barely scratch the surface of needed preservation and maintenance. For all practical intents and purpose, there is no ongoing routine care of the Woods.

Several factors have combined to alter the character of the Woods over the period of Town ownership including a vastly increased deer population and climate change. The primary change is the accelerated spread of invasive non-native species such as bamboo, kudzu, honeysuckle, English ivy, and Norway maples. "Invasives" are plants that are so successful competing for available sunlight and moisture that they make it impossible for desirable plants to survive in the same space. Invasives eventually choke out most natives, severely disrupting the normal cycle of forest regeneration, and result in a monoculture when they are allowed to grow undeterred. The Town's consulting arborist

estimates that the understory of Porcupine Woods is now approximately 50% invasives. Wildflowers that previously flourished in the Woods – trillium, bloodroot, Solomon’s seal, jack-in-the-pulpit and others – are gone or vastly diminished.

Committee analysis. For years, there has been a tacit acceptance of the notion that leaving the Woods unmanaged is an appropriate way to realize the 1975 committee’s recommendation that the park remain a “quiet, natural place...[with] no unnatural man-made objects.” The current PPW subcommittee looked closely at the 1975 report and found that it in fact made more detailed and nuanced recommendations, most of which not only reflected then-current conditions (e.g., bamboo already present in the park) but also anticipated the heightened environmental issues that concern us today. This subcommittee built upon the recommendations from 1975 (*italics* below), including:

“Dead and hazardous trees and branches should be cut down...” Some non-hazardous snags (standing trunks) of trees should be left for woodpeckers and other wildlife; trees damaged in the 2012 *derecho* or otherwise hazardous (e.g., diseased, leaning over or near paths) should be cut down, leaving most trunks of downed trees to decompose as this contributes to a healthy woodland environment. The 1975 report recommended chipping branches and small limbs, and we recommend a similar program, where possible.

“Remove invading bamboo, briar and honeysuckle...[and] replant with wildlife-attracting shrubs.” This 1975 recommendation was made with specific reference to the area nearest Clermont Avenue, where it was partially carried out. Those viburnums are among the few late-70’s plantings that remain; they have been largely successful, but the nearby bamboo has spread considerably. Bamboo is an invasive that creates a “green desert”: nothing else will grow because the bamboo blocks all light and its root system out-competes other growth. After much discussion and consultation, the current committee believes that the 1975 committee got it right: removal is the only sensible option. Although “containment” of bamboo is expensive, not fully effective, and requires constant maintenance, it is an alternative.

We also believe that the Town should encourage heightened volunteer efforts to remove invasives. Volunteer work to remove bush honeysuckle, Norway maple and certain other invasives along the west side of the path has met with a degree of success. More work is required to address the same problem throughout the park, however. If volunteer work is insufficient to make real headway, hiring help for the Town maintenance crew would be advisable.

Recommendations. Although some work in Porcupine Woods can be accomplished by volunteers, meaningful steps require more formal Town involvement, including financial commitment, by:

Hiring professional services to remove bamboo and, if necessary, install a barrier. As discussed above, bamboo is a significant problem in Porcupine Woods, becoming more so in recent years as the bamboo has spread to the path through the Woods. The subcommittee contacted several reputable firms for the removal of the bamboo. In the view of the subcommittee, CC Bamboo of Chester, PA,

is a company that has the superior expertise, specialized equipment, and breadth of experience to undertake the removal and containment of PPW bamboo without damage to existing trees or the environment. They do not use herbicides; their equipment is specifically designed for the task and has no adverse impact on the soil, either at the site or by compaction along paths used to bring the equipment to the site. They have not yet provided an estimate of the cost of removal and/or containment, but based on what we have learned from other companies and the cost range given by CCBamboo based on other jobs, we believe that CCBamboo's price will fall between the low (\$13,000) and high (\$32,000) estimates that we received from other companies.

Hiring a professional tree service to remove a limited number of identified trees. We recommend professional removal of four trees and some of the largest downed tree trunks now littering the northwest side of the Woods near Penn Place. The subcommittee has obtained an estimate from David Gregg Tree Service. For the work specified above, the cost would be about \$5,600.

Authorizing the Town maintenance staff to chip in place downed limbs and branches, using the chips to renew the pathways or broadcasting them in the woods to decompose. Downed limbs and branches in areas away from places accessible to the chipper (mostly in the northeast and northwest portions of Porcupine Woods) can be dragged to several separate spots to serve as shelter for wildlife. The subcommittee recommends that the Town maintenance staff be tasked with completing this task this winter to minimize possible damage to other vegetation in the Woods.

Authorize planting appropriate replacement trees and shrubs using native stock, if possible, and typically planted by the Town maintenance staff. A wider diversity of plants that are both deer resistant and non-invasive should be introduced. The subcommittee estimates the likely costs associated with such plantings to be in the range of \$5,000.

In the view of the subcommittee, the chipping and bamboo work should begin as soon as possible. The best time to perform most of the heavy work on the trees is during the winter months, when the ground is hard and when damage to the Woods caused by the work would be minimized. In addition, it would be advantageous to start the work in mid-winter because the price quotes of professional contractors usually decline in the winter when they have less competing, contractual work.

Conclusion: Although volunteer efforts in Porcupine Woods have been generous and are deserving of the Town's gratitude, they are not enough to effectively provide, consistently and over time, the "quiet, natural place" envisioned when the Woods was purchased for the enjoyment of residents. It is time for the Town to make a further concerted investment in the stewardship of this major holding – originally acquired with great effort and at considerable expense – so that it will be the valuable asset envisioned in 1975.